



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/535,665

05/11/2005

Danny Sebbane

ASSIA 21.929
(056730-0009)

4323

26304 7590 03/26/2007
KATTEN MUCHIN ROSENMAN LLP
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER

KHOSHNOODI, FARIBORZ

ART UNIT

PAPER NUMBER

2168

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

03/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/535,665	Applicant(s) SEBBANE, DANNY	
	Examiner Fariborz Khoshnoodi	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>5/11/2005</u> . | 6) <input type="checkbox"/> Other: ____ |

Detailed Action

Claims objection

1. Claim 1 and 11 objected to because of the following informalities:

Claim 1 is objected to because it recites “an hierachical” in line 6. Also in claim 1 (line 6) the word “hierachical” needs to be change to “hierarchical”. Appropriate correction is required.

Claim 11 is objected to because the claim depends to itself. For examining purposes considered that claim 11 depended to claim 10. Appropriate correction is required.

Drawings

2. The Drawing is objected to because of improper shading for figures 1-9. 37 CFR 1.84 (a) (1) dictates the sole use of black and white drawings. Gray shading is not permitted. According to 37 CFR 1.84 (m), shading must be in the form of thin lines spaced closely together. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112 (2nd). Use of the term "some" in line 1 renders the claim indefinite. Examiner cannot establish pass/fail criteria with the term "some".

Claim 1 recites "the knowledge base" in line 1. There is no antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-6 and 8-11 are rejected under 35 U.S.C. § 102(e) as being anticipated by Szabo United States Patent No. 7,181,438 B1.

As per claim 1:

Szabo teaches a method comprising: **Submission of an hierachical query** (*i.e.*,
"The query generation process may contain a knowledge base
including a thesaurus that has predetermined and embedded
complex search queries, or use natural language processing, or
fuzzy logic, or tree structures, or hierarchical relationship or
a set of commands that allow persons seeking information to

Art Unit: 2168

formulate their queries."(Col. 8 lines 6-12)); **recording the queries of the organization, comprising saving-submitter and organization information** (i.e., *"In a further refinement, search results found through a query outside the directory, for example through a metasearch process, can be organized under directory headings. In this case, the directory may be queried as to whether and where it references a web resource, and if it does, the resource(s) may be saved to that (those) locations;"*(Col. 57 lines 13-19)); **comparing queries using a weight matrix generated by a distance function** (i.e., *"Frequency programs have been developed by the travel industry to promote customer loyalty. An example of such a program is a "frequent flyer" program. According to such a program, when a traveler books a flight, a certain amount of "mileage points" is calculated by a formula using the distance of the destination as a parameter."*(Col. 24 lines 21-26)); **and clustering of the queries into a semantic structure** (i.e., *"This intelligent assistance preferably involves an interactive communication between the user and search engine, wherein a context, e.g., semantic taxonomic placement, of the search query is successively defined and refined."*(Col. 47 lines 3-6)).

Art Unit: 2168

As per claim 2:

Szabo teaches a method further comprising: **gathering data for the organization and entering it in the organization DB** (i.e., "In order to provide this capability, information retrieval systems must generally categorize documents received from publishers (or drawn from accessible databases) according to their subject, prior to adding them to the database." (Col. 9 lines 12-16)).

As per claim 3:

Szabo teaches a method comprising the steps of: **gathering data into the organization DB** (i.e., "In order to provide this capability, information retrieval systems must generally categorize documents received from publishers (or drawn from accessible databases) according to their subject, prior to adding them to the database." (Col. 9 lines 12-16)); **generating a vector structure of the data** (i.e., "The information is stored in an inverted index file, which may also be used to calculate document link vectors for each hyperlink pointing to a particular document." (Col. 22 lines 46-49)); **and using the vector structure in order to form semantic familiarities (clustering words, i.e., "connections")** (i.e., "When a query is entered, the search engine finds all document vectors for documents having the query terms in their anchor text. A query vector is also calculated, and

Art Unit: 2168

the dot product of the query vector and each document link vector is calculated. The dot products relating to a particular document are summed to determine the relevance ranking for each document." (Col. 22 lines 49-55)).

As per claim 4:

Szabo teaches a method further comprising **enhancing the queries for later pre-processing of the data, in order to best exploit the latter element of method 3** (*i.e.*, "Advantageously, the information associated with this web page may be updated and enhanced automatically, to represent a history of use by the user." (Col. 49 lines 9-12)).

As per claim 5:

Szabo teaches a method wherein enhancing comprises: **enhancing words appearing in queries by multiplying the number of appearances with a constant** (*i.e.*, "Therefore, for example, user's query might be "sports", but user selects the taxonomic node "baseball", or a web-page in which the word "baseball" is prominent; user's query string might profitably be expanded to "sports AND baseball," or just "baseball," for the purpose of a search of other materials, for example, through a metasearch procedure of other search engines. By a like procedure, OR conditions and NOT (dissimilarity) might

Art Unit: 2168

be appended to user's query, or used to modify user's query, or replace user's query, to enhance such a follow-on search." (Col. 76 lines 12-22)); **comparing the distribution of a word within the organization DB and its distribution in Natural Language (NL)** (i.e., "User enters a string of words onto a character-based "edit line" and then strikes the "enter" key on user's keyboard or selects a search button using a pointing device. The string of words may be fashioned by a user into a Boolean logical sentence, employing the words "AND," "OR," and "NOT," but more typically the user enters a set of words in so-called "natural language" that lack logical connectors, and software called a "parser" takes user's natural language query and estimates which logical connections exist among the words." (Col. 3 lines 51-60)) ; **and weighting words appearances in the DB and the queries relative to appearances in the NL** (i.e., "Words, particularly simple verbs, conjunctions and prepositions are often preemptively excluded from the term index as presumptively carrying no significant informational weight. Various heuristics can be employed to identify other words that appear too frequently within a document collection to likely serve to contextually differentiate the various documents of the collection." (Col. 25 lines 24-30)).

Art Unit: 2168

As per claim 6:

Szabo teaches a method further comprising **clustering the data** (i.e., "At the lowest level of hierarchy, the most basic data units are organized into various sets, or cluster-objects of related information. At the next level of hierarchy, related cluster-objects from the lower hierarchical level are organized into a higher-level cluster-object." (Col. 17 lines 45-50)).

As per claim 8:

Szabo teaches a method further comprising: **using queries' data for searching information (implementing a search engine)** (i.e., "Generally speaking, search engines for the World Wide Web (WWW, or simply "Web") aid users in locating resources among the estimated present one billion addressable sites on the Web. Search engines for the web generally employ a type of computer software called a "spider" to scan a proprietary database that is a subset of the resources available on the Web." (Col. 1 lines 50-56)).

As per claim 9:

Szabo teaches a method comprising the steps of: **searching information using the queries' structure (clusters)** (i.e., "Generally speaking, search engines for the World Wide Web (WWW, or simply "Web") aid users in

Art Unit: 2168

locating resources among the estimated present one billion addressable sites on the Web. Search engines for the web generally employ a type of computer software called a "spider" to scan a proprietary database that is a subset of the resources available on the Web." (Col. 8 lines 6-12)); **presenting queries' structure with respect to a new query (when a user presents a new query, the system rates the nearest clusters according to the new query)** (*i.e., "The search process can utilize any available index and search engine techniques including Boolean, vector, and probabilistic, as long as a substantial portion of the entire domain of archived textual data is searched for each query and all documents found are returned to the organizing process."* (Col. 8 lines 12-17)); **and presenting submitted queries in order to facilitate the submission of a new query** (*i.e., "The search results are then presented to the user and arranged by category along with an indication as to the number of relevant documents found in each category. The user may then examine search results in multiple formats, allowing the user to view as much of the document as the user deems necessary."* (Col. 8 lines 22-27)).

As per claim 10:

Szabo teaches a method further comprising: **using the queries structure to create an organization map** (*i.e., "graphic representation implying a specific*

Art Unit: 2168

search path that a user may take in examining the available information, the interface system comprising means for generating a coded data map reflecting the organization of the entire information within the information base" (Col. 18 lines 31-35)).

As per claim 11:

Szabo teaches a method, wherein using the queries structure to create an organization map comprises: **developing a method that facilitates the designation of experts concerning the requested data** (i.e., "The SEMNET developers propose organizing component data units of an information base into various levels of hierarchy. At the lowest level of hierarchy, the most basic data units are organized into various sets, or cluster-objects of related information." (Col. 17 lines 43-48)); **and providing a graphical organization map of the data occurrences and the experts** (i.e., "graphic presentation means generating the dynamic graphic representation based on the data map, the dynamic graphic representation comprising at least one molecule for the first hierarchical level of organization, the at least one first-hierarchical-level molecule having at least one first-hierarchical-level thread of multiple first-hierarchical-level nodes connected in sequence" (Col. 18 lines 40-47)).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Szabo United States Patent No. 7,181,438 B1 in view of Everett United States Patent Publication No. 2004/0024790 A1.

As per claim 7:

Szabo also teaches a method, **using queries as a predisposed factor, thereby replacing the random factor when performing clustering** (i.e., "However, in many cases, cookies are preferably supplemented with or replaced by information stored at the server level, and accessible to user through a security recognition scheme. Thus, the cookie preferably provides an address within a server database for critical information, rather than the information itself." (Col. 60 lines 3-8)).

Szabo does not explicitly disclose for the overcoming an information bottleneck. However, Everett teaches a method, **wherein clustering the data comprises: using information theories in order to assemble and represent the data, thereby overcoming an**

Art Unit: 2168

information bottleneck (i.e., "The KnOS's efficiency of operation, measured in processor time required per end-user transaction, can be corrected, post implementation, to eliminate any bottlenecks y identifying the correct "context" for each bottleneck and then segmenting the VK Sets into dedicated tag sets by context. All KnOS bottlenecks are related to clusters of VK Sets with overly broad or muddled contexts" (Par. 441)); **using queries as prior knowledge for the information bottleneck** (i.e., "Because the KnOS architecture is 100% parallel, the equivalent of the relational select operation (step #6) can be separated from the equivalent to the relational join. The KnOS equivalent of the join operation (pooling/filtering), which is the core bottleneck of an RDBMS, can be run at any layer of the computing stack-the database processor, the web application server or the desktop." (Par. 425 lines 1-6)) ; **clustering data (agglomerative, sequential clustering)** (i.e., "However, the number of database processors can be expanded across a loosely coupled cluster architecture either to service greater numbers of concurrent sessions or to service disk farms that measure into the terabyte range." (Par. 412 lines 14-17));

Therefore, it would have been obvious to a person in the art at the time the invention was made to modify the method disclosed in Szabo to have the overcoming an information

Art Unit: 2168

bottleneck. This modification would have been obvious because a person having ordinary skill in the art, at the time the invention was made, having the teachings of Szabo and Everett before him/her, to modify the system of Szabo to include the overcoming an information bottleneck of Everett, since it is suggested by Everett such that, by spreading data over any number of servers reduces contention (*i.e.*, "Because each Item is fully encapsulated with a primitive level of granularity, the data farm can be spread across any number of data servers without increasing contention. Also, because there is no need for sequence in the disk arrangement, the Items can be arranged across the data servers based on each one's request profile to balance workload." (Par. 426 lines 1-7)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farihorz Khoshnoodi whose telephone number is 571-270-1005. The examiner can normally be reached on M-Th every other F 8:00-4:00..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on 571-272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2168

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Fariborz Khoshnoodi
Examiner
Art Unit 2168

FK *F.K.*

TM 3/12/07



TIM VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100